

are taking out pillars (of coal) which were left on the road to the working faces further in, and which now that these inside places are worked out, are no longer required.

#### CHASE RIVER MINE.

The workings here are from a slope about 500 yards long. The coal is mined principally from what is known as the No. 1 level, but there are a few other places where they are taking out pillars. About 400 yards along the above level a slant branches off in a northerly direction, angling across the pitch of the coal, and is down about 400 yards at the bottom. It is under the sea at head of Nanaimo harbour. The thickness of strata intervening between the salt water and the workings underground is about 500 feet, made up of shale, sandstone and conglomerate rock. This is quite a sufficient cover for safety against the salt water. There is a little water that comes out of the coal and rock, but it is found to be quite free from salt. At the bottom the coal is four feet thick, hard, and of good quality. This mine is wrought on the pillar and stall system, the coal varying in thickness from four to six feet, with a pitch varying from 10 to 45 degrees. Nearly all the way down this slant the coal is good and hard. The miners have not met with anything to hinder their progress, and at the face now it is almost flat. This drive continued on its present course would come close to the shaft which is being put down at the Esplanade, in Nanaimo, about 1,000 yards distant. This mine is almost entirely free from fire-damp. The fireman on going into the places in the morning will occasionally see just enough to let him know that there is gas in the mine. This place is ventilated by a large furnace at the bottom of the upcast shaft. The air is conducted in on the separate split system. Ventilation is very good, and the air is conducted close into the face of the stalls, the pillars between being thin, so that whenever it is required there is a connection or place put through to the next stall, hence the return; so that after the air has gone around the working faces it returns by the furnace to the upcast shaft. The workings of this mine and the workings of Douglas pit are connected, and are all as one, which makes them very extensive. In the winter season the flow of water gets to be very heavy in this place. Being the lowest of all those workings, it drains to the pumps here; and this winter the present pumping machinery has not been large enough to keep the water out, so that there has been very little coal coming from the lower level for some time. Now they are erecting another large pump, which will be working two or three days from now, so that the mine will be kept dry without causing any delay to the working of it.

#### FITZWILLIAM MINE.

There has been nothing done at this mine in the way of taking out coal since the end of April last, but there is a likelihood of it being started again. This company has been carrying on very extensive works in exploring and opening new mines. Amongst them is the shaft I mentioned in my previous report. It is now down to the depth of 450 feet, which leaves 150 feet to get to the coal. Owing to a strong inflow of water they had to stop work in the bottom about two months ago until they get a large engine erected, which is to be a double engine with two 30-inch cylinders, seven feet stroke. This engine is supposed

to be able to do all the work in the way of taking out water, and all the hoisting that will be required at this place. About 75 yards to the north of No. 1 shaft they are putting down another shaft 16 feet in diameter, which is now down 120 feet, having gone through one vein of coal two feet thick, which is hard and good. At this shaft there is also a double engine with two cylinders, 16 inches in diameter, four feet stroke. This engine has been worked in the No. 1 shaft for a short time. All this machinery, with boilers and appliances for the same, with pumps, gearing, rails, etc., came from England during the past year.

There is also a new mine starting at Southfield. A tunnel has been put in 250 yards in the coal, but it is not so thick and regular as it is expected to be when further in. From the commencement it has varied in thickness from one to ten feet. Ahead of this tunnel there were a series of bore-holes put down some time ago, which proved that the coal they went through with those borings varied in thickness from six to twelve feet. It is to be hoped that at this place there will be a profitable and extensive mine. As the tramway is nearly all graded and about one-half of it laid with rails, and the other half is about ready for them, there will be no delay, when they once get into the coal, to get it to the wharf.

In the Westfield, they put down a bore-hole, but did not succeed in finding the coal. Now, they are putting down another, which shows good indications of getting what is known here as the Wellington coal.

#### WELLINGTON COLLIERIES.

##### WELLINGTON MINE.

This slope is down about 1,000 yards. The coal mining here as in all the other mines belonging to this company is wrought on the pillar and stall system, and is hauled out by a powerful double engine erected some distance from the entrance or mouth of the slope. This being the main traveling way into the mine, it is kept in good order and is quite safe. The roof is supported on timbers from 12 to 15 inches in diameter, which are always renewed from time to time as required, being put in in a substantial and workman-like manner. The signal, or telegraph, runs the entire length of the slope, with a battery in the engine-house to which is attached a bell fixed near to the engine-driver. This signal can be immediately utilized on any part of the slope. There are four levels worked from here, two to each side of the slope, known as 9 and 10, on one side, and 7 and 8 on the other. The coal in these places is from six to ten feet thick and is of well-known good quality.

The ventilation of this mine is obtained partly by a large furnace at the bottom of one of the upcast shafts, and partly by a large fan worked by a double engine erected at the top of another upcast shaft. The No. 2 shaft is also ventilated by means of this fan, being 30 feet in diameter and 10 feet wide. Ventilation is good. There are three main divisions of air travelling here, which are conducted well into the workings by stoppings, and when near the face of the stall by brattice. In this mine there is now very little fire-damp met with. The fireman sometimes sees it when examining the works in the morning previous to his notifying the miners that the works are all clear or otherwise. I have been through all the working places, airways, and a great part of the old works, and I have